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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,896

06/02/2006

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KIT-405

9602

24972 7590 02/20/2009
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EXAMINER

MEHTA, HONG T

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

02/20/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,896	Applicant(s) NAGAO ET AL.	
	Examiner HONG MEHTA	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>August 23, 2006 and</u> | 6) <input type="checkbox"/> Other: _____ |
| <u>June 2, 2006</u> | |

DETAILED ACTION

This office action is in reply to application 10/566896 filed on January 31, 2006. Claims 1-13 are pending. Claim 1 is the independent claim.

Claim Objections

1. Claims 1, 2 and 9 are objected to because of the following informalities. In claim 1, line 2, "contacting said roasted coffee beans flowing steam" and claim 9, line 3, "having a said steam is water saturated steam" are grammatically incorrect. In claim 2, before the line 6, it should read "the" or "said". Appropriate correction is required.
2. Examiner notes for the purpose of examination in claim 1, the phrase "contacting said roasted coffee beans --with a-- or --by-- flowing steam" is suggested language.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 9 states a dependence on claim 18, which does not exist in the pending claims of this application.
6. Claim 9 recites the limitation "the method of steam treated coffee beans" in 1. There is insufficient antecedent basis for this limitation in the claim.
7. Examiner notes for the purpose of examination, claim 9 is considered to be dependent on claim 1.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 1-6, and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Maki et al. (WO 95/20325).

10. Regarding claim 1, Maki et al. teaches a method multiphase steaming steps for reducing acid (pg. 2, lines 18-19) in roasted coffee beans (pg. 2, lines 14-17) comprising contacting roasted coffee beans with a flowing steam for a time sufficient, 50 to 300 seconds (pg. 2, lines 24) and 60 to 800 seconds (pg. 3, lines 10-14; pg. 5, lines 7-14) to reduce acid (pg. 16, Table 3). Maki et al. teaches a reduction of acidity in both phases of steaming of coffee beans. The decrease of pH values in the different stages, from conventional roasting with a pH reading of 5.69 to steaming process with a pH readings of 5.42 to 5.47 are in relation to the reduction of acid in roasted coffee beans.

11. Examiner notes Maki et al. teaches steam treatments of coffee beans for reduction of acid. The first step of steaming taught by Maki et al. is considered to be roasting the coffee beans. The Maki's steaming as admitted by applicant in the specification on page 8, lines 5-13, and lies in definition of applied heat source considered to be roasted coffee beans. Maki et al. teaches a second step of steaming

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treats the "roasted" coffee beans for further resulting in decrease of acidity within the roasted coffee beans (pg. 2)

12. Additional, the recitation in line 4 of claim 1, "time sufficient" in which the element of "sufficient" to perform a given function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

13. **Regarding claim 2**, Maki et al. teaches roasted coffee beans are placed in an apparatus (pg. 4, line 1-4; figure 1) which has a steam supply passage, steam feeding valve, part 5 and a steam exhaust passage (pg. 4, line 9; figure 1, part 5) comprising flowing steam from the steam supply passage further comprising flowing steam from steam feeding valve (pg. 5, line 14), "steam supply passage" and the opening of a pressure relief valve (pg. 5, line 16) "steam exiting" has an outlet pressure higher than atmospheric pressure (pg. 5, lines 6-17).

14. **Regarding claims 9 and 10**, Examiner notes Maki et al. teaches steam in the method which encompasses the scope of the claim of water saturated steam.

15. **Regarding claims 3 and 4**, Maki et al. teaches roasted coffee beans comprising whole roasted beans (pg. 5, lines 4-5, lines 22-23; pg. 6, lines, 11-12).

16. **Regarding claim 5 and 6**, Maki et al. teaches roasted coffee comprising ground roasted coffee beans (pg. 12, lines 1-2) capable of passing through a mesh with an aperture of 1.7 mm (pg. 14, line 9-11).

17. Examiner notes Maki et al. teaches coffee beans (pg. 3, line 10) which encompasses different forms of coffee beans, whole or/and ground. Attention is invited to Maki's ground roasted coffee beans are capable of passing through a U.S. No. 50

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screening mesh which is equivalent to standard sieve opening of 0.297 mm, hence Maki's ground roasted coffee beans are capable of passing through the mesh opening of 1.7 mm.

18. Maki et al. discloses the grounding of the steam treated roasted coffee beans for extraction (pg. 12, lines 1-6). As Maki et al. uses the like materials in a like manner as claimed, it would therefore be expected that the ratio percentage of ground coffee beans are present in an amount of 70% to roasted coffee beans, will have the same characteristics claimed, particularly the percentage of the SAME steam treated roasted coffee beans, ground or/and whole, absence a showing of unexpected results.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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21. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

22. **Claims 7, 8 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maki et al. (WO 95/20325) as applied to claims 1, in view of McCartney (US 3,420,674 A) in further as evidence by Sivetz et al. (Coffee Processing Technology 1963).**

23. **Regarding claims 7-9 and 11-13**, Maki et al. teaches all aspects as discussed above to claim 1. Maki et al. discloses steam temperatures of 251° to 400°C (Abstract). Maki et al. does not disclose the amount of steam weighting to roasted coffee beans, steam temperatures of 100° to 230°C. Maki et al. is silent on extraction ratio of at least 35% of steam treated roasted coffee beans and total amount of formic acid and acetic acid less than 0.25% of the with of said roasted coffee beans.

24. However, McCartney disclose an extraction process of roasted and ground coffee comprising water saturated steam to remove residual acids (col. 1, lines 15-19; lines 62-65). McCartney discloses a steam at a temperature about 180 to 230°F (82 to 110°C) (col. 2, lines 60-61). It would have been obvious to modify the method of Maki

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by using the temperatures of McCartney as McCartney teaches a known steam temperatures to be effective for removing acids in coffee extraction process.

25. One of ordinary skill in the art at the time of the invention was made would have considered the invention to have been obvious because the compositional proportions taught by McCartney overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portions of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

26. "The normal desire of scientists or artisans to improve upon what is already generally known provide the motivation to determine where in a disclosed set of percentage ranges is the optimum combinations of percentages", *In re Peterson* 65 USPQ2d 1379 (CAFC 2003).

27. Also, *In re Geisler* 43 USPQ2d 1365 (Fed. Cir. 1997); *In re Malagari*, 182 USPQ 549,553 (CCPA 1974) and MPEP 2144.05.

28. McCartney teaches weight ratio of extracting steam to roasted and ground coffee beans, amount of 22.2%. McCartney discloses a formulation with 400 grams of steam (col. 3, line 49-50) to 1800 grams (col. 3, line 43) roasted ground coffee beans.

Therefore, McCartney discloses an amount of the steam is at least 10% of the weight of the roasted coffee beans.

29. McCartney teaches a process with the amount of steam to roasted coffee beans, an amount of at least 10% extraction ratio and steaming temperature about 110°C for

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reducing acidity in roasted coffee beans for an acceptable levels of volatile acids (col. 1, lines 45-49). It would have been obvious to a person of ordinary skill in the art of the time of the inventions to add the features taught by McCartney to the process of Maki et al., as McCartney teaches the additional steps improves on the acceptable flavor, aroma character and contains an acceptable level of volatile acids, intermediate solids and insoluble coffee solids (col. 1, lines 57-61).

30. It is further expected that the processes of Maki et al. and McCartney reduce the acidity levels in steam roasted coffee beans would fall within the scope of claim 12 and 13, since the claimed end product may encompass a wide range of amount of acids, in particularly volatile acids, formic and acetic acids. Due to the natural present of a preservative in coffee beans, it is farther expected that the amount of the same in the product by process of Maki et al. and McCartney would provide the same amount. The ratios of claims 12 and 13 would be expect in the coffee beans as produced by the method of Maki in view of McCartney as the method steps are commensurate as is the material treated.

Further, it is known in the art of coffee processing emphasized by Sivetz et al. to have roasted coffee beans with volatile acids, formic and acetic acids (pg. 232, paragraph 3) wherein the amount with about 0.04% wt. of roasted coffee (pg. 233, lines 4-6), which is less than 0.25% wt of roasted coffee beans.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HONG MEHTA whose telephone number is (571)270-

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7093. The examiner can normally be reached on Monday thru Thursday, from 7:30 am to 4:30 pm EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/JENNIFER MCNEIL/

Supervisory Patent Examiner, Art Unit 1794